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DEEP CREEK LAKE GARRETT COUNTY, MARYLAND

Pacific Northwest Environmental
Research Laboratory

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June 1975

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NATIONAL EUTROPHICATION SURVEY

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16. ABSTRACT

Annual total phosphorus and total nitrogen loadings to the lake were estimated and subdivided according to either point or non-point source origin. An assessment of the lake's trophic condition and limiting nutrient is also provided. All data collected by the U.S.E.P.A. National Eutrophication Survey during the one year study of the lake and its tributaries are included in the report.

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REPORT
ON
DEEP CREEK LAKE
GARRETT COUNTY
MARYLAND
EPA REGION III
WORKING PAPER No. 355

WITH THE COOPERATION OF THE
MARYLAND DEPARTMENT OF NATURAL RESOURCES,
MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE,
AND THE
MARYLAND NATIONAL GUARD

JUNE, 1975

REPORT ON DEEP CREEK LAKE

GARRETT COUNTY, MARYLAND, EPA REGION III

by

National Eutrophication Survey

Water and Land Monitoring Branch
Monitoring Applications Laboratory
National Environmental Research Center
Las Vegas, Nevada

and

Eutrophication Survey Branch
Pacific Northwest Environmental Research Laboratory
National Environmental Research Center
Corvallis, Oregon

Working Paper No. 355

OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY

June 1975

CONTENTS

	Page
Foreword	ii
List of Maryland Study Lakes	iv
Lake and Drainage Area Map	v
Sections	
I. Conclusions	1
II. Lake and Drainage Basin Characteristics	3
III. Lake Water Quality Summary	5
IV. Nutrient Loadings	10
V. Literature Reviewed	14
VI. Appendices	15

FOREWORD

The National Eutrophication Survey was initiated in 1972 in response to an Administration commitment to investigate the nationwide threat of accelerated eutrophication to freshwater lakes and reservoirs.

OBJECTIVES

The Survey was designed to develop, in conjunction with state environmental agencies, information on nutrient sources, concentrations, and impact on selected freshwater lakes as a basis for formulating comprehensive and coordinated national, regional, and state management practices relating to point source discharge reduction and nonpoint source pollution abatement in lake watersheds.

ANALYTIC APPROACH

The mathematical and statistical procedures selected for the Survey's eutrophication analysis are based on related concepts that:

a. A generalized representation or model relating sources, concentrations, and impacts can be constructed.

b. By applying measurements of relevant parameters associated with lake degradation, the generalized model can be transformed into an operational representation of a lake, its drainage basin, and related nutrients.

c. With such a transformation, an assessment of the potential for eutrophication control can be made.

LAKE ANALYSIS

In this report, the first stage of evaluation of lake and watershed data collected from the study lake and its drainage basin is documented. The report is formatted to provide state environmental agencies with specific information for basin

planning [§303(e)], water quality criteria/standards review [§303(c)], clean lakes [§314(a,b)], and water quality monitoring [§106 and §305(b)] activities mandated by the Federal Water Pollution Control Act Amendments of 1972.

Beyond the single lake analysis, broader based correlations between nutrient concentrations (and loading) and trophic condition are being made to advance the rationale and data base for refinement of nutrient water quality criteria for the Nation's freshwater lakes. Likewise, multivariate evaluations for the relationships between land use, nutrient export, and trophic condition, by lake class or use, are being developed to assist in the formulation of planning guidelines and policies by EPA and to augment plans implementation by the states.

ACKNOWLEDGMENTS

The staff of the National Eutrophication Survey (Office of Research and Development, U.S. Environmental Protection Agency) expresses sincere appreciation to the Maryland Department of Natural Resources and the Maryland Department of Health and Mental Hygiene for professional involvement and to the Maryland National Guard for conducting the tributary sampling phase of the Survey.

Paul W. Slunt, Chief, Water Quality Services, James T. Allison, Natural Resources Manager, Water Quality Services, of the Maryland Department of Natural Resources, and Earl S. Quance, Chief, Division of Water and Sewerage, Maryland Department of Health and Mental Hygiene provided invaluable lake documentation and counsel during the course of the Survey.

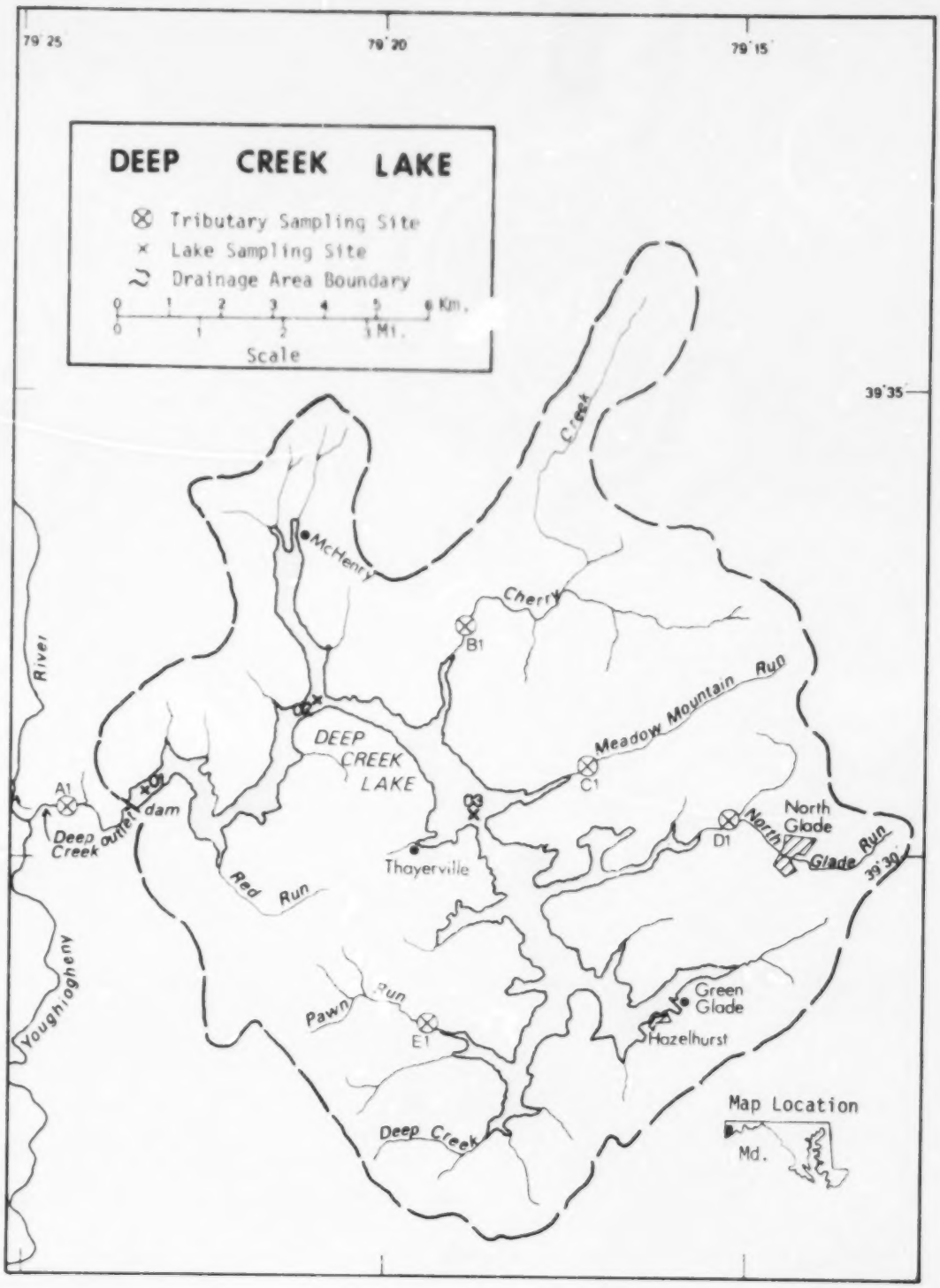
Major General Edwin Warfield III, the Adjutant General of Maryland, and Project Officer Colonel Bernard Feingold, who directed the volunteer efforts of the Maryland National Guardsmen, are also gratefully acknowledged for their assistance to the Survey.

NATIONAL EUTROPHICATION SURVEY

STUDY LAKES

STATE OF MARYLAND

LAKE NAME	COUNTY
Deep Creek Lake	Garrett
Liberty Reservoir	Carroll, Baltimore
Loch Raven Reservoir	Baltimore
Johnson Pond	Wicomico


79°25
79°20
79°15
39°35
39°30
DEEP CREEK LAKE
Tributary Sampling Site
Lake Sampling Site
Drainage Area Boundary
0 1 2 3 4 5 6 Km.
0 1 2 3 Mi.
Scale
McHenry
Cherry
Creek
B1
Meadow Mountain Run
C1
DEEP CREEK LAKE
A1
Deep Creek outlet
dam
Thayerville
Red Run
D1
North Glade
North Glade Run
Pawn Run
E1
Green Glade
Hazelhurst
Youghiogheny River
Deep Creek
Map Location
Md.

DEEP CREEK LAKE

STORET NO. 2402

I. CONCLUSIONS

A. Trophic Condition*:

Deep Creek Lake is characterized as mesotrophic on the basis of survey data. Nutrient concentrations and potential for primary productivity as measured by algal assay control yield were low, while Secchi disc transparency was high. No algal blooms or aquatic weeds were noted by survey limnologists, and chlorophyll a levels were moderately low. However, oxygen depletion occurred below 9.7 meters during summer and fall, and bottom hydrogen sulfide formation was reported at station 2 during October sampling.

B. Rate-Limiting Nutrient:

Algal assay results indicate that Deep Creek Lake was limited by available phosphorus levels. Spikes with phosphorus, and nitrogen and phosphorus simultaneously result in increases in assay yield. Additions of nitrogen alone did not stimulate a growth response. The ratio of available nitrogen to phosphorus in sampled waters substantiates phosphorus limitation.

* See Appendix E

C. Nutrient Controllability:

1. Point Sources - During the sampling year, the mean annual phosphorus load impacting Deep Creek Lake was less than the "permissible" (oligotrophic) rate proposed by Vollenweider (in press) for a lake of such volume and detention time. Shoreline septic tanks, estimated to account for 9% of the total phosphorus load, are the only known discharges reaching the lake. Future point sources should be carefully evaluated in order to maintain the existing high quality of Deep Creek Lake.

2. Nonpoint Sources - The mean annual phosphorus load from nonpoint sources was about 91% of the total reaching the lake. Measured tributaries accounted for 24.0% of the total phosphorus load and ungaged tributaries accounted for 57.3%

II. LAKE AND DRAINAGE BASIN CHARACTERISTICS

Lake and drainage basin characteristics are itemized below. Lake morphometry was provided by the State of Maryland; tributary data were provided by the Maryland District Office of the U.S. Geological Survey (USGS) (outlet drainage area includes the lake surface area). Mean hydraulic retention time was obtained by dividing the lake volume by mean flow of the outlet.

All outflow from this reservoir is diverted through a tunnel to the power generators of the Pennsylvania Electric Company [site F(1)]. This outflow was combined with estimated seepage from Deep Creek Dam to determine total outflow.

Precipitation values are estimated by methods as outlined in National Eutrophication Survey (NES) Working Paper No. 175. A table of metric/English conversions is included as Appendix D.

A. Lake Morphometry:

1. Surface area: 15.78 km^2.
2. Mean depth: 8.1 meters.
3. Maximum depth: 21.9 meters.
4. Volume: 127.842 x 10^6 m^3.
5. Mean hydraulic retention time: 1.1 years.

B. Tributary and Outlet:
(See Appendix A for flow data)

1. Tributaries -

Name	Drainage area(km^2)	Mean flow (m^3/sec)
B(1) Cherry Creek	32.1	0.49
C(1) Meadow Mountain Run	7.8	0.19
D(1) North Glade Run	10.3	0.13
E(1) Pawn Run	5.6	0.16
Minor tributaries & immediate drainage -	95.8	2.58
Totals	151.6	3.55
2. Outlet - F(1) Outlet Aqueduct	167.6	3.55

C. Precipitation:

1. Year of sampling: 129.9 centimeters.

2. Mean annual: 121.4 centimeters.

III. LAKE WATER QUALITY SUMMARY

Deep Creek Lake was sampled three times during the open-water season of 1973 by means of a pontoon-equipped Huey helicopter. Each time, samples for physical and chemical parameters were collected from four stations on the lake and from a number of depths at each station (see map, page v). During each visit, depth-integrated samples were collected from each station for chlorophyll a analysis and phytoplankton identification and enumeration. During the first visit, 18.9-liter depth-integrated samples were composited for algal assays. Maximum depths sampled were 19.5 meters at station 1, 17.1 meters at station 2, 12.2 meters at station 3, and 11.0 meters at station 4. For a more detailed explanation of NES methods, see NES Working Paper No. 175.

The results obtained are presented in full in Appendix B and are summarized in III A for waters at the surface and at the maximum depth for each site. Results of the phytoplankton counts and chlorophyll a determinations are included in III B. Results of the limiting nutrient study are presented in III C.

A. SUMMARY OF PHYSICAL AND CHEMICAL CHARACTERISTICS FOR DEEP CREEK LAKE
STORET CODE 2402

PARAMETER	1ST SAMPLING (4/21/73) 4 SITES RANGE	MEAN	MEDIAN	2ND SAMPLING (7/28/73) 4 SITES RANGE	MEAN	MEDIAN	3RD SAMPLING (10/ 4/73) 4 SITES RANGE	MEAN	MEDIAN
TEMP (C)	6.1 - 11.9	8.6	8.8	10.6 - 24.4	20.5	23.5	9.7 - 19.9	17.8	18.9
DISS OXY (MG/L)	10.5 - 11.4	11.1	11.2	1.3 - 8.3	6.1	7.7	0.2 - 8.0	5.8	7.3
CNDCTVY (MCROMO)	55. - 65.	59.	60.	40. - 59.	53.	56.	48. - 75.	55.	53.
PH (STAND UNITS)	7.7 - 8.3	7.9	7.9	5.8 - 6.9	6.2	6.1	5.9 - 6.7	6.2	6.2
TOT ALK (MG/L)	10. - 10.	10.	10.	10. - 20.	12.	10.	10. - 23.	11.	10.
TOT P (MG/L)	0.006 - 0.017	0.009	0.007	0.009 - 0.017	0.012	0.011	0.008 - 0.100	0.018	0.014
ORTHO P (MG/L)	0.002 - 0.005	0.003	0.004	0.004 - 0.009	0.006	0.006	0.002 - 0.010	0.006	0.006
NO2+NO3 (MG/L)	0.400 - 0.580	0.455	0.460	0.160 - 0.360	0.252	0.250	0.040 - 0.140	0.078	0.075
AMMONIA (MG/L)	0.020 - 0.080	0.045	0.050	0.030 - 0.360	0.126	0.055	0.090 - 0.850	0.229	0.110
KJEL N (MG/L)	0.200 - 0.600	0.292	0.200	0.200 - 0.500	0.300	0.300	0.300 - 1.100	0.585	0.500
INORG N (MG/L)	0.450 - 0.620	0.500	0.500	0.240 - 0.590	0.378	0.335	0.150 - 0.890	0.308	0.190
TOTAL N (MG/L)	0.600 - 1.010	0.747	0.665	0.440 - 0.730	0.552	0.525	0.350 - 1.150	0.663	0.595
CHLRPYL A (UG/L)	4.3 - 7.0	5.2	4.8	4.7 - 9.5	7.9	8.6	3.0 - 6.9	5.3	5.7
SECCHI (METERS)	1.8 - 3.0	2.2	2.0	3.0 - 4.3	3.7	3.7	2.3 - 3.8	3.1	3.1

B. Biological Characteristics:

1. Phytoplankton -

Sampling Date	Dominant Genera	Algal Units per ml
04/21/73	1. Flagellates	334
	2. Dinobryon	167
	3. Asterionella	128
	4. Cryptomonas	128
	5. Ankistrodesmus	69
	Other genera	107
	Total	933
07/23/73	1. Chrysocapsa	686
	2. Dinobryon	591
	3. Flagellates	528
	4. Stephanodiscus	169
	5. Melosira	137
	Other genera	370
	Total	2,481
10/04/73	1. Tabellaria	821
	2. Dinobryon	692
	3. Flagellates	315
	4. Melosira	231
	5. Synura	147
	Other genera	203
	Total	2,409

2. Chlorophyll *a* -

Sampling Date	Station Number	Chlorophyll *a* (micrograms/Liter)
04/21/73	1	5.0
	2	4.3
	3	4.7
	4	7.0
07/28/73	1	4.7
	2	8.9
	3	8.4
	4	9.5
10/04/73	1	5.6
	2	3.0
	3	5.8
	4	6.9

C. Limiting Nutrient Study:

1. Autoclaved, filtered, and nutrient spiked -

Spike(mg/l)	Ortho P Conc.(mg/l)	Inorganic N Conc.(mg/l)	Maximum Yield (mg/l-dry wt.)
Control	0.008	0.482	0.2
0.05 P	0.058	0.482	7.2
0.05 P + 1.0 N	0.058	1.482	13.4
1.00 N	0.008	1.482	0.1

2. Discussion -

The control yield of the assay alga, Selenastrum capricornutum, indicates that the potential for primary production in Deep Creek Lake was low at the time of sampling. The increase in yield with the addition of 0.05 mg/l phosphorus indicates phosphorus limitation. Spikes of nitrogen alone produced no positive growth response. Maximum growth potential was achieved with the simultaneous addition of both phosphorus and nitrogen.

The ratio of inorganic nitrogen to dissolved phosphorus was about 64:1 in the field samples for Deep Creek Lake, indicating the lake was phosphorus limited at the time of assay sample collection.

IV. NUTRIENT LOADINGS
(See Appendix C for data)

For the determination of nutrient loadings, the Maryland National Guard collected monthly near-surface grab samples from each of the tributary sites indicated on the map (page v), except for the high runoff months of February and March when two samples were collected. Sampling was begun in May 1973, and was completed in May 1974.

Through an interagency agreement, stream flow estimates for the year of sampling and a "normalized" or average year were provided by the Maryland District Office of the USGS for the tributary sites nearest the lake.

In this report, nutrient loads for sampled tributaries were calculated from mean annual concentrations and mean annual flows.

Nutrient loadings for unsampled "minor tributaries and immediate drainage" ("ZZ" of USGS) were estimated by using the mean annual concentrations in Cherry Creek Meadow, Mountain Run and North Glade Run at stations B(1), C(1), and D(1) and mean annual ZZ flow.

A. Annual Total Phosphorus Loading - Average Year:

1. Inputs -

Source	kg P/yr	% of total
a. Tributaries (nonpoint load) -		
B(1) Cherry Creek	205	7.2
C(1) Meadow Mountain Run	90	3.2
D(1) North Glade Run	130	4.6
E(1) Pawn Run	255	9.0
b. Minor tributaries & immediate drainage (nonpoint load) -	1,625	57.3
c. Known municipal STP's -	None	
d. Septic tanks* -	255	9.0
e. Known industrial -	None	
f. Direct precipitation** -	275	9.7
Total	2,835	100.0

2. Outputs - Outlet Aqueduct 890

3. Net annual P accumulation - 1,945 kg.

*Estimate based on 900 lakeside residences.
**Estimated (see NES Working Paper No. 175).

B. Annual Total Nitrogen Loading - Average Year:

1. Inputs -

Source	kg N/yr	% of total
a. Tributaries (nonpoint load) -		
B(1) Cherry Creek	9,285	7.0
C(1) Meadow Mountain Run	4,715	3.5
D(1) North Glade Run	6,205	4.7
E(1) Pawn Run	10,665	8.0
b. Minor tributaries & immediate drainage (nonpoint load) -	75,635	56.8
c. Known municipal STP's -	None	
d. Septic tanks * -	9,590	7.2
e. Known industrial -	None	
f. Direct precipitation** -	17,040	12.8
Total	133,135	100.0

2. Outputs - Outlet Aqueduct 68,106

3. Net annual N accumulation - 65,029 kg.

*Estimate based on 900 lakeside residences.
**Estimated (see NES Working Paper No. 175).

C. Mean Annual Nonpoint Nutrient Export by Subdrainage Area:

Tributary	kg P/km^2/yr	kg N/km^2/yr
B(1) Cherry Creek	6	289
C(1) Meadow Mountain Run	12	604
D(1) North Glade Run	13	602
E(1) Pawn Run	46	1,904

D. Yearly Loading Rates:

In the following table, the existing phosphorus loading rates are compared to those proposed by Vollenweider (in press). Essentially, his "dangerous" rate is the rate at which the receiving waters would become eutrophic or remain eutrophic; his "permissible" rate is that which would result in the receiving water remaining oligotrophic or becoming oligotrophic if morphometry permitted. A mesotrophic rate would be considered one between "dangerous" and "permissible".

	Total Yearly Phosphorus Loading Rate (grams/m^2/year)
Estimated loading rate for Deep Creek Lake	0.18
Vollenweider's "dangerous" or eutrophic rate	0.53
Vollenweider's "permissible" or oligotrophic rate	0.26

V. LITERATURE REVIEWED

U.S. Environmental Protection Agency. 1975. "National Eutrophication Survey Methods 1973-1976." Working Paper No. 175. NERC, Las Vegas, Nevada and PNERL, Corvallis, Oregon.

Vollenweider, Richard A. (in press). "Input-Output Models." Schweiz Z. Hydrol.

VI. APPENDICES

APPENDIX A

TRIBUTARY FLOW DATA

TRIBUTARY FLOW INFORMATION FOR MARYLAND 9/16/75

LAKE CODE 2402 DEEP CREEK RESERVOIR

TOTAL DRAINAGE AREA OF LAKE(SQ KM) 167.6

TRIBUTARY	SUB-DRAINAGE AREA(SQ KM)	NORMALIZED FLOWS(CMS) JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	MEAN
2402A1	171.5	0.15	0.16	0.20	0.14	0.10	0.06	0.04	0.05	0.03	0.03	0.06	0.11	0.09
2402B1	32.1	0.79	0.88	1.08	0.76	0.54	0.28	0.20	0.22	0.11	0.15	0.31	0.59	0.49
2402C1	7.8	0.28	0.31	0.40	0.28	0.20	0.12	0.09	0.09	0.05	0.07	0.13	0.23	0.19
2402D1	10.3	0.22	0.24	0.28	0.21	0.15	0.08	0.06	0.06	0.03	0.05	0.08	0.17	0.13
2402E1	5.6	0.27	0.31	0.40	0.26	0.18	0.08	0.05	0.06	0.03	0.04	0.08	0.20	0.16
2402F1	167.6	3.71	3.14	3.40	3.03	2.72	2.58	2.89	4.08	3.71	4.28	4.53	4.33	3.54
2402ZZ	111.6	4.13	4.45	5.61	3.96	2.86	1.53	1.10	1.19	0.62	0.82	1.61	3.14	2.58

SUMMARY

TOTAL DRAINAGE AREA OF LAKE = 167.6
SUM OF SUB-DRAINAGE AREAS = 167.5

TOTAL FLOW IN = 42.79
TOTAL FLOW OUT = 43.51

NOTE *** SEE WRITE-UP ON DEEP CREEK RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
2402A1	5	73	0.10	12	0.16				
	6	73	0.07	10	0.05				
	7	73	0.02	16	0.03				
	8	73	0.03	12	0.02				
	9	73	0.02	9	0.01				
	10	73	0.05	14	0.02				
	11	73	0.11	11	0.06				
	12	73	0.19	9	0.08				
	1	74	0.25	13	0.37				
	2	74	0.12	9	0.15	24	0.13		
	3	74	0.13	9	0.13	24	0.13		
	4	74	0.15	14	0.23				
240281	5	73	0.54	12	0.88				
	6	73	0.37	10	0.22				
	7	73	0.09	16	0.10				
	8	73	0.12	12	0.07				
	9	73	0.09	9	0.02				
	10	73	0.23	14	0.08				
	11	73	0.57	11	0.26				
	12	73	1.05	9	0.40				
	1	74	1.44	13	2.12				
	2	74	0.62	9	0.85	24	0.71		
	3	74	0.68	9	0.71	24	0.68		
	4	74	0.82	14	1.30				

TRIBUTARY FLOW INFORMATION FOR MARYLAND 9/16/75

LAKE CODE 2402 DEEP CREEK RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
2402C1	5	73	0.20	12	0.31				
	6	73	0.14	10	0.09				
	7	73	0.05	16	0.05				
	8	73	0.06	12	0.03				
	9	73	0.05	9	0.01				
	10	73	0.10	14	0.04				
	11	73	0.22	11	0.12				
	12	73	0.37	9	0.16				
	1	74	0.48	13	0.68				
	2	74	0.24	9	0.31	24	0.26		
	3	74	0.26	9	0.26	24	0.25		
	4	74	0.31	14	0.45				
2402D1	5	73	0.15	12	0.24				
	6	73	0.10	10	0.06				
	7	73	0.03	16	0.03				
	8	73	0.03	12	0.02				
	9	73	0.03	9	0.01				
	10	73	0.06	14	0.02				
	11	73	0.15	11	0.08				
	12	73	0.28	9	0.11				
	1	74	0.37	13	0.54				
	2	74	0.17	9	0.22	24	0.19		
	3	74	0.19	9	0.19	24	0.18		
	4	74	0.22	14	0.34				
2402E1	5	73	0.18	12	0.31				
	6	73	0.10	10	0.06				
	7	73	0.02	16	0.03				
	8	73	0.03	12	0.01				
	9	73	0.02	9	0.01				
	10	73	0.06	14	0.02				
	11	73	0.18	11	0.08				
	12	73	0.37	9	0.12				
	1	74	0.54	13	0.85				
	2	74	0.21	9	0.28	24	0.24		
	3	74	0.23	9	0.23	24	0.23		
	4	74	0.29	14	0.48				
2402F1	5	73	5.80	12	0.99				
	6	73	4.16	10	0.0				
	7	73	3.20	16	1.19				
	8	73	2.80	12	0.0				
	9	73	1.39						
	10	73	1.98						
	11	73	2.80	8	2.75	16	2.80		
	12	73	3.40	3	2.83	17	2.80	28	4.25
	1	74	0.91	2	4.19	16	7.14	31	9.71
	2	74	7.90	19	7.25	28	7.56		
	3	74	4.93	15	5.61				
	4	74	3.45	2	3.09	14	0.0	17	3.26

TRIBUTARY FLOW INFORMATION FOR MARYLAND 9/16/75

LAKE CODE 2402 DEEP CREEK RESERVOIR

MEAN MONTHLY FLOWS AND DAILY FLOWS(CMS)

TRIBUTARY	MONTH	YEAR	MEAN FLOW	DAY	FLOW	DAY	FLOW	DAY	FLOW
2402ZZ	5	73	2.86	12	4.47				
	6	73	1.90	10	1.19				
	7	73	0.54	16	0.59				
	8	73	0.65	12	0.37				
	9	73	0.54	9	0.14				
	10	73	1.22	14	0.45				
	11	73	2.97	11	1.47				
	12	73	5.38	9	2.12				
	1	74	7.16	13	10.34				
	2	74	3.31	9	4.28	24	3.65		
	3	74	3.57	9	3.62	24	3.54		
	4	74	4.25	14	6.65				

18

APPENDIX B

PHYSICAL and CHEMICAL DATA

STORET RETRIEVAL DATE 75/09/16

240201
39 30 38.0 079 23 22.0
DEEP CREEK LAKE
24023 MARYLAND

11EPALES
3

2111202
0064 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/04/21	13	30 0000	11.9		120	60	7.80	10K	0.060	0.600	0.400	0.005
	13	30 0006	10.8	11.3		55	7.90	10K	0.050	0.600	0.410	0.004
	13	30 0015	9.4	11.4		55	8.00	10K	0.050	0.200K	0.400	0.004
	13	30 0022	7.0	11.4		55	8.00	10K	0.050	0.200	0.400	0.004
	13	30 0032	6.5	11.0		55	8.00	10K	0.050	0.200K	0.400	0.004
	13	30 0045	6.2	10.9		55	7.90	10K	0.050	0.200K	0.400	0.004
	13	30 0060	6.1	10.7		55	7.90	10K	0.080	0.200K	0.430	0.002K
73/07/28	11	40 0000	23.5	8.0	144	56	6.70	10K	0.040	0.300	0.300	0.007
	11	40 0005	23.5			56						
	11	40 0010	23.5			56						
	11	40 0015	23.3	8.3		54	6.60	10K	0.040	0.200K	0.290	0.007
	11	40 0020	22.1	8.2		50	6.20	10K	0.050	0.200K	0.290	0.009
	11	40 0025	18.0			45						
	11	40 0030	15.5	6.9		42	5.80	10K	0.090	0.200K	0.360	0.008
	11	40 0040	13.6			40						
	11	40 0050	10.6	3.0		40	5.80	10K	0.210	0.400	0.310	0.006
73/10/04	15	50 0000	19.1		149	51	6.70	10K	0.190	0.600	0.140	0.005
	15	50 0005	19.0	7.6		50	6.20	10K	0.180	0.500	0.130	0.003
	15	50 0015	18.9	7.2		50	6.10	10K	0.190	0.700	0.140	0.002
	15	50 0025	18.5	6.8		48	6.00	10K	0.140	0.700	0.110	0.008
	15	50 0045	11.6	0.2		50	5.90	13	0.630	1.000	0.050	0.003
	15	50 0057	9.7	0.4		55	6.00	17	0.830	1.100	0.050	0.002

K VALUE KNOWN TO BE
LESS THAN INDICATED

20

STORET RETRIEVAL DATE 75/09/16

240201
39 30 38.0 079 23 22.0
DEEP CREEK LAKE
24023 MARYLAND

11EPALES 2111202
3 0064 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/21	13 30	0000	0.007	5.0
	13 30	0006	0.006	
	13 30	0015	0.006	
	13 30	0022	0.006	
	13 30	0032	0.006	
	13 30	0045	0.006	
	13 30	0060	0.008	
73/07/28	11 40	0000	0.010	4.7
	11 40	0015	0.012	
	11 40	0020	0.017	
	11 40	0030	0.011	
	11 40	0050	0.011	
73/10/04	15 50	0000	0.008	5.6
	15 50	0005	0.008	
	15 50	0015	0.008	
	15 50	0025	0.011	
	15 50	0045	0.014	
	15 50	0057	0.018	

STORET RETRIEVAL DATE 75/09/16

240202
39 31 40.0 079 20 54.0
DEEP CREEK LAKE
24023 MARYLAND

11EPALES
3

2111202
0056 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/04/21	14	10 0000	11.6		84	58	7.70	10K	0.030	0.400	0.480	0.004
	14	10 0006	10.9	11.4		60	7.90	10K	0.040	0.200K	0.490	0.005
	14	10 0015	10.0	11.4		58	7.90	10K	0.030	0.200	0.460	0.005
	14	10 0022	8.2	11.4		60	7.80	10K	0.030	0.200	0.460	0.002K
	14	10 0030	6.9	11.2		60	7.70	10K	0.060	0.200	0.440	0.002
	14	10 0040	6.7	11.0		60	7.80	10K	0.050	0.200K	0.420	0.002
	14	10 0052	6.7	10.9		60	7.70	10K	0.060	0.200	0.440	0.005
73/07/28	12	30 0000	24.2	8.0	168	57	6.60	10K	0.050	0.200K	0.270	0.005
	12	30 0010	23.9			57						
	12	30 0015	23.8	8.0		56	6.40	10K	0.030	0.200K	0.270	0.006
	12	30 0020	23.5	7.2		55	5.80	10K	0.050	0.200K	0.260	0.005
	12	30 0025	19.2			50						
	12	30 0030	15.5	2.9		48	5.80	14	0.350	0.400	0.220	0.005
	12	30 0035	14.5			47						
	12	30 0040	13.6			47						
	12	30 0045	12.9	1.3		48	5.90	14	0.360	0.500	0.230	0.009
73/10/04	15	25 0000	19.1		144	53	6.10	10	0.100	0.500	0.100	0.006
	15	25 0005	19.1	8.0		51	6.00	10K	0.100	0.500	0.090	0.010
	15	25 0015	18.7	7.4		51	6.00	10	0.100	0.400	0.080	0.007
	15	25 0025	18.5	7.2		52	6.00	10	0.110	0.400	0.080	0.004
	15	25 0045	14.0	0.2		75	6.30	23	0.850	1.100	0.040	0.006

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/09/16

240202
39 31 40.0 079 20 54.0
DEEP CREEK LAKE
24023 MARYLAND

11EPALES 2111202
3 0056 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/21	14	10 0000	0.008	4.3
	14	10 0006	0.008	
	14	10 0015	0.007	
	14	10 0022	0.007	
	14	10 0030	0.007	
	14	10 0040	0.006	
	14	10 0052	0.006	
73/07/28	12	30 0000	0.009	8.9
	12	30 0015	0.010	
	12	30 0020	0.010	
	12	30 0030	0.011	
	12	30 0045	0.012	
73/10/04	15	25 0000	0.010	3.0
	15	25 0005	0.015	
	15	25 0015	0.010	
	15	25 0025	0.014	
	15	25 0045	0.100	

23

STORET RETRIEVAL DATE 75/09/16

240203
39 30 25.0 079 18 42.0
DEEP CREEK LAKE
24023 MARYLAND

1 1EPALES 2111202
3 0040 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/04/21	14	40 0000	10.7		75	60	8.00	10K	0.040	0.400	0.460	0.003
	14	40 0006	10.4	11.2		60	8.00	10K	0.040	0.200	0.470	0.005
	14	40 0016	9.0	11.2		60	7.90	10K	0.040	0.300	0.480	0.002K
	14	40 0026	7.6	11.2		60	7.90	10K	0.050	0.200	0.450	0.003
	14	40 0036	7.1	11.1		60	7.70	10K	0.050	0.200	0.460	0.003
73/07/28	13	05 0000	24.4	8.2	144	58	6.50	10	0.060	0.300	0.240	0.006
	13	05 0005	24.1			58						
	13	05 0010	24.0			57						
	13	05 0015	23.9	8.0		57	6.30	10K	0.030	0.200	0.240	0.008
	13	05 0020	23.6			56						
	13	05 0025	20.0	4.8		53	5.90	11	0.160	0.200	0.260	0.005
	13	05 0030	14.7	2.0		50	6.00	16	0.280	0.400	0.220	0.006
73/10/04	15	05 0000	19.2		104	55	6.30	10K	0.100	0.500	0.080	0.006
	15	05 0005	19.2	8.0		53	6.20	10K	0.100	0.400	0.080	0.007
	15	05 0015	18.9	7.8		52	6.20	10K	0.100	0.400	0.070	0.008
	15	05 0025	18.7	7.4		53	6.30	10K	0.100	0.300	0.070	0.006
	15	05 0032	17.2	2.6		62	6.00	15	0.360	0.700	0.040	0.007

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/09/16

240203
39 30 25.0 079 18 42.0
DEEP CREEK LAKE
24023 MARYLAND

11EPALES 2111202
3 0040 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/21	14 40	0000	0.007	4.7
	14 40	0006	0.007	
	14 40	0016	0.013	
	14 40	0026	0.011	
	14 40	0036	0.007	
73/07/28	13 05	0000	0.010	8.4
	13 05	0015	0.014	
	13 05	0025	0.012	
	13 05	0030	0.011	
73/10/04	15 05	0000	0.013	5.8
	15 05	0005	0.014	
	15 05	0015	0.013	
	15 05	0025	0.016	
	15 05	0032	0.020	

STORET RETRIEVAL DATE 75/09/16

240204
39 28 40.0 079 17 26.0
DEEP CREEK LAKE
24023 MARYLAND

11EPALES
3

2111202
0036 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00010 WATER TEMP CENT	00300 DO MG/L	00077 TRANSP SECCHI INCHES	00094 CNDUCTVY FIELD MICROMHO	00400 PH SU	00410 T ALK CACO3 MG/L	00610 NH3-N TOTAL MG/L	00625 TOT KJEL N MG/L	00630 NO2&NO3 N-TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P
73/04/21	15	10 0000	11.2		72	65	8.30	10K	0.030	0.500	0.500	0.002
	15	10 0006	10.5	11.4		60	8.10	10K	0.020	0.400	0.500	0.002
	15	10 0015	7.8	11.4		60	8.00	10K	0.040	0.400	0.580	0.003
	15	10 0022	6.9	10.6		60	8.00	10K	0.040	0.300	0.510	0.004
	15	10 0032	6.6	10.5		60	8.00	10K	0.050	0.300	0.480	0.004
73/07/28	13	35 0000	24.4	8.1	120	57	6.90	12	0.040	0.400	0.210	0.007
	13	35 0005	24.3			59						
	13	35 0010	24.2			59						
	13	35 0015	24.1	8.0		56	6.70	12	0.040	0.300	0.200	0.007
	13	35 0020	23.9	7.4		56	6.00	12	0.080	0.300	0.210	0.005
	13	35 0025	20.5			56						
	13	35 0030	16.5	1.4		57	6.00	20	0.300	0.500	0.160	0.004
73/10/04	14	40 0000	19.9		90	60	6.40	10K	0.110	0.800	0.060	0.010
	14	40 0005	19.1	8.0		56	6.40	10K	0.090	0.400	0.060	0.010
	14	40 0015	18.9	7.8		56	6.30	10K	0.100	0.300	0.050	0.006
	14	40 0024	18.5	6.6		57	6.30	10K	0.110	0.400	0.050	0.007

K VALUE KNOWN TO BE
LESS THAN INDICATED

26

STORET RETRIEVAL DATE 75/09/16

240204
39 28 40.0 079 17 26.0
DEEP CREEK LAKE
24023 MARYLAND

11EPALES 2111202
3 0036 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00665 PHOS-TOT MG/L P	32217 CHLRPHYL A UG/L
73/04/21	15 10	0000	0.012	7.0
	15 10	0006	0.014	
	15 10	0015	0.012	
	15 10	0022	0.017	
	15 10	0032	0.013	
73/07/28	13 35	0000	0.013	9.5
	13 35	0015	0.013	
	13 35	0020	0.011	
	13 35	0030	0.016	
73/10/04	14 40	0000	0.020	6.9
	14 40	0005	0.023	
	14 40	0015	0.016	
	14 40	0024	0.019	

APPENDIX C

TRIBUTARY and WASTEWATER TREATMENT PLANT DATA

STORET RETRIEVAL DATE 75/09/16

2402A1
39 31 00.0 079 24 20.0
DEEP CREEK
24017 7.5 SANG RUN
O/DEEP CREEK LAKE
SEC RD BRDG .7 MI W OF DAM
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/12	13 15		0.180	1.380	0.052	0.005K	0.015
73/06/10	16 00		0.033	0.460	0.060	0.005K	0.005K
73/07/16	13 17		0.140	0.180	0.016	0.007	0.007
73/08/12	16 53		0.154	0.190	0.033	0.012	0.012
73/09/09	08 28		0.015	0.100K	0.090	0.005K	0.005K
73/10/14	16 25		0.075	0.560	0.039	0.005K	0.005K
73/11/11	12 30		0.210	1.700	0.096	0.005K	0.010
73/12/09	13 20		0.188		0.024	0.008	
74/01/13	09 00		0.232	0.100	0.018	0.005K	0.005
74/02/09	12 20		0.252	0.100K	0.020	0.010	0.025
74/02/24	10 28		0.216	0.100K	0.055	0.005K	0.010
74/03/09	12 30		0.184	0.100	0.010	0.005K	0.025
74/03/24	09 30		0.224	0.100K	0.050	0.005K	0.005K
74/04/14	11 00		0.160	0.200	0.040	0.005K	0.005K
74/05/12	08 22		0.156	0.200	0.090	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/09/16

240281
39 32 20.0 079 18 55.0
CHERRY CREEK
24 7.5 MCHENRY
T/DEEP CREEK LAKE
BANK OFF ROCK LODGE RD .3 MI FROM MOUTH
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/12	13 46		0.200	0.600	0.089	0.005K	0.010
73/06/10	16 20		0.052	0.330	0.037	0.006	0.010
73/07/16	13 45		0.082	0.610	0.120	0.005K	0.015
73/08/12	17 20		0.150	0.920	0.115	0.008	0.010
73/09/09	08 55		0.088	0.270	0.170	0.005K	0.005K
73/10/14	16 50		0.176	0.350	0.056	0.008	0.008
73/11/11	12 55		0.260	0.250	0.071	0.005K	0.045
73/12/09	13 45		0.352	0.200	0.052	0.005K	0.005K
74/01/13	09 25		0.400	0.100	0.032	0.005K	0.005
74/02/09	12 45		0.384	0.100K	0.060	0.010	0.010
74/02/24	10 54		0.390		0.125	0.010	0.012
74/03/09	12 55		0.276	0.300	0.042	0.005K	0.030
74/03/24	09 50		0.360	0.200	0.060	0.005K	0.005K
74/04/14	11 25		0.276	0.300	0.055	0.005K	0.005K
74/05/12	08 45		0.140	0.100	0.045	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/09/16

2402C1
39 31 00.0 079 17 14.0
MEADOW MOUNTAIN RUN
24 7.5 MCHENRY
T/DEEP CREEK LAKE
BANK OFF END OF BRANT RD 1000FT FR MOUTH
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/12	14 18		0.230	1.100	0.058	0.005K	0.020
73/06/10	16 35		0.050	0.390	0.094	0.006	0.025
73/07/16	13 47		0.150	0.190	0.026	0.010	0.020
73/08/12	17 30		0.126	0.225	0.021	0.009	0.020
73/09/09	09 10		0.440	0.480	0.087	0.011	0.020
73/10/14	17 00		0.160	0.330	0.022	0.007	0.007
73/11/11	13 10		0.220	1.550	0.069	0.005K	0.020
73/12/09	14 00		0.270	0.900	0.040	0.005K	0.005K
74/01/13	09 40		0.430	0.100K	0.012	0.005K	0.005
74/02/09	13 05		0.336	0.300	0.015	0.010	0.015
74/02/24	11 05		0.360	0.300	0.015	0.005K	0.010
74/03/09	13 05		0.288	0.100	0.025	0.005K	0.030
74/03/24	10 05		0.360	1.100	0.065	0.005K	0.005
74/04/14	11 45		0.264	0.200	0.040	0.005K	0.005
74/05/12	08 55		0.208	0.300	0.025	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/09/16

2402D1
39 30 25.0 079 15 10.0
NORTH GLADE RUN
24 7.5 MCHENRY
T/DEEP CREEK LAKE
BANK OFF N GLADE RD BLOW 2 FORKS OF CRK
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/12	14 44		1.020	0.790	0.046	0.010	0.037
73/06/10	16 50		0.014	0.250	0.115	0.008	0.035
73/07/16	14 10		0.910	0.660	0.075	0.013	0.030
73/08/12	17 50		0.880	0.700	0.032	0.012	0.030
73/09/09	09 25		0.030	0.370	0.068	0.018	0.050
73/10/14	17 15		1.300	0.380	0.028	0.017	0.020
73/11/11	13 30		1.200	0.400	0.039	0.006	0.035
73/12/09	14 12		1.260	1.100	0.064	0.008	0.030
74/01/13	10 00		1.360	0.100	0.016	0.005K	0.020
74/02/09	13 45		1.260	0.100K	0.020	0.015	0.025
74/02/24	11 23		1.400	0.200	0.030	0.005	0.025
74/03/09	13 25		1.180	0.300	0.015	0.005	0.050
74/03/24	10 25		1.300	0.100	0.030	0.005K	0.020
74/04/14	12 00		1.100	0.300	0.040	0.005	0.025
74/05/12	09 10		0.650	0.600	0.060	0.010	0.030

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/09/16

2402E1
39 28 12.0 079 19 20.0
PAWN RUN
24 7.5 DEER PARK
T/DEEP CREEK LAKE
BANK OFF PENN POINT RD 1000FT FROM MOUTH
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/05/12	15	11	1.380	0.350	0.050	0.015	0.045
73/06/10	17	10	1.400	0.560	0.126	0.023	0.055
73/07/16	14	45	1.760	0.690	0.084	0.036	0.075
73/08/12	18	15	1.500	0.800	0.064	0.042	0.080
73/09/09	09	55	0.028	0.430	0.105	0.035	0.085
73/10/14	17	45	1.360	0.660	0.024	0.026	0.050
73/11/11	14	00	2.000	0.350	0.050	0.010	0.050
73/12/09	15	00	1.900	0.900	0.052	0.008	0.025
74/01/13	10	30	1.850	0.400	0.024	0.005K	0.030
74/02/09	14	30	1.800	0.100K	0.030	0.015	0.025
74/02/24	11	57	1.900	0.200	0.020	0.010	0.035
74/03/09	13	50	1.850	0.300	0.020	0.010	0.065
74/03/24	11	00	1.700	0.200	0.030	0.005	0.030
74/04/14	12	25	1.600	0.300	0.025	0.010	0.035
74/05/12	09	30	1.040	0.450	0.055	0.015	0.035

K VALUE KNOWN TO BE
LESS THAN INDICATED

STORET RETRIEVAL DATE 75/09/16

2402F1
39 31 24.0 079 24 50.0
OUTLET AQUEDUCT
24 7.5 SANG RUN
T/DEEP CREEK LAKE
AT BALTIMORE WATER SUPPLY POWER HOUSE
11EPALES 2111204
4 0000 FEET DEPTH

DATE FROM TO	TIME OF DAY	DEPTH FEET	00630 NO2&NO3 N-TOTAL MG/L	00625 TOT KJEL N MG/L	00610 NH3-N TOTAL MG/L	00671 PHOS-DIS ORTHO MG/L P	00665 PHOS-TOT MG/L P
73/11/08	10 30		0.066	0.450	0.180	0.006	0.006
73/11/16	10 30		0.104	0.250	0.084	0.005K	0.035
73/12/03	13 00		0.116	0.300	0.108	0.005K	0.005K
73/12/13	15 30		1.360	0.200	0.032	0.005K	0.010
73/12/17	10 30		0.052	0.100	0.080	0.005K	0.005K
73/12/28	09 30		1.360	0.200	0.056	0.005K	0.005K
74/01/02	10 30		0.134	0.300	0.068	0.008	0.008
74/01/16	10 30		0.224	0.150	0.048	0.005K	0.005
74/01/31	10 30		0.336	0.100K	0.068	0.005K	0.005
74/02/19	12 00		0.288	0.200	0.045	0.005	0.015
74/02/28	11 30		0.288	0.300	0.040	0.005K	0.025
74/03/15	09 30		0.320	0.200	0.040	0.005K	0.005K
74/04/02	13 00		0.312	0.300	0.030	0.005	0.005
74/04/17	13 00		0.310	0.300	0.020	0.005K	0.005K
74/05/02	10 30		0.320	0.200	0.010	0.005K	0.005
74/05/17	13 30		0.320	0.100K	0.025	0.010	0.010
74/06/03	15 00		0.300	0.200	0.025	0.005K	0.005K

K VALUE KNOWN TO BE
LESS THAN INDICATED

APPENDIX D

CONVERSION FACTORS

CONVERSION FACTORS

Hectares x 2.471 = acres

Kilometers x 0.6214 = miles

Meters x 3.281 = feet

Cubic meters x 8.107×10^{-4} = acre/feet

Square kilometers x 0.3861 = square miles

Cubic meters/sec x 35.315 = cubic feet/sec

Centimeters x 0.3937 = inches

Kilograms x 2.205 = pounds

Kilograms/square kilometer x 5.711 = lbs/square mile

APPENDIX E

PARAMETRIC RANKINGS OF LAKES

SAMPLED BY NES IN 1973

STATE OF MARYLAND

LAKES RANKED BY INDEX NOS.

RANK	LAKE CODE	LAKE NAME	INDEX NO
1	2402	DEEP CREEK LAKE	550
2	2403	LIBERTY RESERVOIR	268
3	2-08	LOCH RAVEN RESERVOIR	215
4	2409	JOHNSON POND	167

LAKE DATA TO BE USED IN RANKINGS

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P
2402	DEEP CREEK LAKE	0.011	0.450	382.167	6.150	14.800	0.005
2403	LIBERTY RESERVOIR	0.018	1.760	401.833	6.325	14.900	0.006
2408	LOCH RAVEN RESERVOIR	0.023	1.440	429.555	7.133	14.800	0.007
2409	JOHNSON POND	0.098	0.950	458.250	26.225	7.200	0.040

PERCENT OF LAKES WITH HIGHER VALUES (NUMBER OF LAKES WITH HIGHER VALUES)

LAKE CODE	LAKE NAME	MEDIAN TOTAL P	MEDIAN INORG N	500-MEAN SEC	MEAN CHLORA	15-MIN DO	MEDIAN DISS ORTHO P	INDEX NO
2402	DEEP CREEK LAKE	100 (3)	100 (3)	100 (3)	100 (3)	50 (1)	100 (3)	550
2403	LIBERTY RESERVOIR	67 (2)	0 (0)	67 (2)	67 (2)	0 (0)	67 (2)	268
2408	LOCH RAVEN RESERVOIR	33 (1)	33 (1)	33 (1)	33 (1)	50 (1)	33 (1)	215
2409	JOHNSON POND	0 (0)	67 (2)	0 (0)	0 (0)	100 (3)	0 (0)	167